BOWEN UNIVERSITY, IWO
DEPARTMENT OF PHYSIOLOGY
FACULTY OF BASIC MEDICAL & HEALTH SCIENCES
FIRST SEMESTER EXAMINATION 2018/19
400 LEVEL B.Sc. PHYSIOLOGY/NUTRITION AND DIATETICS

PHS 419 (ANIMAL EXPERIMENTATION)

Date: Monday 14th January, 2019 Time: 2 Hours

Instruction

Attempt all questions.

You must submit section A before commencing section B

Answer section A and B in a separate answer booklets

Each section should be answered on a separate booklet.

Section A

1. a. What is animal experimentation (10 mks)
   b. Give ten reasons to justify animal experimentation (10 mks)

Section B

2. Table 1 contains the raw data obtained from an animal experimentation showing the plasma creatinine concentration (mg/dl) of seven different groups of ten Wistar strain rats each. Use the table provided to
   a. prepare a table of values with Standard Error of Mean for the distribution (5mks)
   b. plot a graph for the distribution (5mks)
   c. provide a complete interpretation of the analyzed data (10mks)
3. Use table 1 to answer the following questions,
   a. Assuming group 1 was the control group and group 5 was the only experimental group, represent this relationship with a graph and interpret it. (10mks)
   b. Identify and distinguish between the statistical method used in the analysis in question 2 and that used in question 3 (10mks)

Table 1: Plasma Creatinine (mg/dl) of the Wistar stain Rats.

Wistar Rats	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
R1	0.68	0.72	0.69	0.79	0.64	0.92	0.80
R2	0.62	0.70	0.64	0.78	0.62	0.85	0.83
R3	0.63	0.77	0.68	0.86	0.65	0.79	0.84
R4	0.59	0.69	0.72	0.89	0.62	0.90	0.83
R5	0.64	0.68	0.71	0.79	0.61	0.94	0.75
R6	0.59	0.73	0.70	0.90	0.63	0.83	0.69
R7	0.65	0.75	0.73	0.87	0.68	0.87	0.64
R8	0.62	0.72	0.74	0.80	0.62	0.75	0.78
R9	0.61	0.72	0.73	0.83	0.63	0.90	0.82
.R10	0.63	0.78	0.75	0.94	0.62	0.79	0.81